

REMARKS

This is a Preliminary Amendment in connection with the Request for Continued Examination filed herewith. This amendment is responsive to the Advisory Action of August 6, 2004 and the Final Office Action of April 7, 2004. With this amendment, claims 1-19 are cancelled and new claims 20-38 are submitted. Consideration and favorable action are respectfully requested.

In the Office Action, the Examiner raised a rejection under 35 U.S.C § 112 related to various terms and phrases in the independent claims. With the newly submitted claims, this language has been removed and it is believed that the rejection may be withdrawn.

In the Office Action, claims 1-19 were rejected based upon Koshikawa et al. U.S. Patent No. 5,898,542. Claims 1-11 and 13-19 were rejected based upon Okai et al. U.S. Patent No. 5,687,045.

The newly submitted claims include a substrate, transducer and first restraint layer, including a relationship therebetween, which is not shown or suggested by these references.

In the independent claims, a first restraint layer is defined as having a thickness of at least $2\mu\text{m}$. It is believed that this configuration is not shown by the references. Further, the thermal expansion of the first restraint CTE3 of about $1 \times 10^{-6} / ^\circ\text{C}$ to 4.3×10^{-6} such that the first restraint layer contracts relative to the substrate with increasing temperature. As described in the new claims, the expansion and contraction of the various elements are in opposed directions and perpendicular to a plane of the substrate of the air bearing surface. This opposed expansion reduces a distance of a thermal protrusion of the transducer beyond the plane of the substrate and maintains the face of this transducer substantially in the plane of the air bearing surface of the substrate. This is not shown by Koshikawa or Okai.

Furthermore, with the present invention, a large pole tip

recess is not required as in prior art configurations. In the new claims, the face of the transducer is stated to be in the plane of the air bearing surface. This is in contrast to, for example, a Koshikawa et al. '542 in which a large recess is required (for example, figure 5). Such a recess is also shown, for example, in figure 2 of Okai et al. '045.

In view of the above amendments and remarks, it is believed that the present invention is in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

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